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3661
Response Under 37 C.F.R. § 1.116 -
Expedited Procedure - Examining Group 3661

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

DEEPA RAMASWAMY et al.

Group Art Unit: 3661

Examiner: Marthe Y. Marc-Coleman

Serial No.: 10/064,894

Filed: August 27, 2002

For: VEHICLE SYSTEMS CONTROLLER WITH MODULAR
ARCHITECTURE

Attorney Docket No.: 200-1576 (FMC 1649 PUS)

AMENDMENT UNDER 37 C.F.R. § 1.116

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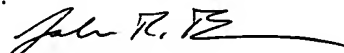
In response to the final Office Action mailed December 4, 2003, please amend
the above-identified application as follows:

CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8

I hereby certify that this paper, including all enclosures referred to herein, is being deposited with the United States Postal Service as first-class mail, postage pre-paid, in an envelope addressed to: Mail Stop AF, Commissioner for Patents, U.S. Patent & Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450 on:

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The battery unit 36 preferably is an integrated unit featuring the battery controller 94, the sensors 114, 116, 188, the relay 96, and the battery 92, as shown in FIG. 3. Such a unitary construction can be removably mounted to the vehicle 20. To facilitate installation and removal, the two-way communication line 222 and the current lines 232, 234 can be connected to the battery controller 94 of the battery unit 36 through any suitable electrical couplers (not shown).

The battery controller 94 has a memory that can store data relating to the battery unit 38, such as temperature, voltage, current and the remaining capacity of the battery 92. This information can be continuously updated. The updated data can be transferred between the battery controller 94 and the vehicle controller 34 to calculate how much power will be required during operation and, when the battery 92 is replaced, the remaining capacity can be immediately recognized by the vehicle controller for processing of expected travel distance, for instance.

The fuel cell unit 38 preferably is an integrated unit as well. As such, the fuel cell unit 38 comprises a fuel cell controller 102, the sensors 120, 122, 124 (FIG. 3), the relay 106 and the fuel cell 100. More preferably, the reformer 62, the shift converter 134, the selective oxidation reactor 136 and the associated lines and valves are integrated into a single module. Such a fuel cell unit 38 can be removably mounted on the vehicle 20 and such a fuel cell unit 38 preferably comprises electrical couplers (not shown), such as quick connectors, that connect the two-way communication line 224 and the current lines 226, 228 to the fuel cell controller 102 of the fuel cell unit 38.

(Column 12, lines 16-45, emphasis added)

Mizuno only discloses that the units 36 and 38 are removable, and fails to disclose that the controller 34 includes portions for controlling the units 36 and 38 which are removable, as described above. Consequently, independent claims 1, 11, and 15, and dependent claims 2-10, 12-14, and 16-18 which depend therefrom and include all the limitations thereof, are not anticipated and patentable over the Mizuno patent.